

REMARKS

The non-final Office Action issued October 13, 2004 has been reviewed and the comments of the U.S. Patent and Trademark Office have been considered. Claims 1-7 have been cancelled pursuant to the preliminary Amendment filed August 22, 2003. Claims 8-12, 20, and 21 have been withdrawn pursuant to an election made on September 07, 2004 and September 29, 2004. Claim 13 has been amended. Thus, applicants respectfully request reconsideration of pending claims 8-24.

The drawings have been objected to by the Examiner. Applicants have concurrently provided with this amendment a replacement set of drawings that addresses the Examiner's objection. Accordingly, this objection should be withdrawn.

Claims 13-19 and 22-24 stand rejected under 35 U.S.C. § 112, second paragraph, as lacking antecedent basis for the phrase "the fuel outlet." Applicants have amended claim 13 to provide antecedent basis for this phrase. Accordingly, this rejection should be withdrawn.

Claims 13-18 and 23 stand rejected under 35 U.S.C. § 102 as being anticipated by WO 97/49911 to Rembold (U.S. Patent No. 6,027,050 to Rembold *et al* is provided by the Examiner as the English translation of Rembold). Claims 13-19 and 22-24 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,667,145 to Schmidt *et al* ("Schmidt"). Insofar as the rejections are applicable to amended claim 13, applicants respectfully traverse the rejections because Rembold or Schmidt fails to teach or suggest the claimed invention as a whole.

Amended claim 13 recites a method of generating a spray pattern that can be achieved, among other features, by engaging a tip of the needle against a surface of the seat to form a seal and providing the seat with a plurality of passages between the surface and the fuel outlet. The seat has an opening disposed on the longitudinal axis at a fuel outlet. Each of the plurality of passages has a central axis having an angle of inclination relative to the longitudinal axis. Support for this amendment to claim 13 is provided by the originally filed application at, for example, page 5, lines 1-14 and Figures 3A and 3B.

In contrast, Rembold fails to show or describe a plurality of passages between a surface in engagement with a tip of needle and an opening of a valve seat. That is, as shown in Figure 5a,

the plurality of passages of Rembold is upstream of a sealing surface 40 defined by the needle 39 and valve seat 41' instead of downstream of the sealing surface 40. Accordingly, claim 13 is patentable over Rembold.

Also in contrast, Schmidt shows, in Figures 1 and 2a, an imperforate portion at the center axis 5 of a nozzle 4 instead of an opening located on the longitudinal axis of the fuel injector. Accordingly, claim 13 is patentable over Schmidt.

Claims 13-19 and 22-24 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-19 and 22-24 of U.S. Patent No. 6,799,733 to Pace *et al* ("Pace"). The Office apparently concludes that claims 13-19 and 22-24 of the instant application are not patentably distinct from claims 13-19 and 22-24 of Pace. Applicants respectfully traverse the rejection as the claims of this application are patentably distinct from the claims of Pace. For example, claim 13 of Pace recites, *inter alia*, the steps of providing the fuel injector and supplying fuel to the fuel injector so that a spray pattern is formed **instead** of *engaging a tip of the needle against a surface of the seat to form a seal and providing the seat with a plurality of passages between the surface and the fuel outlet, the seat having an opening disposed on the longitudinal axis at a fuel outlet, each of the plurality of passages having a central axis having an angle of inclination relative to the longitudinal axis*, as recited in the instant claim 13. Accordingly, claims 13-19 and 22-24 of this application are patentably distinct from claims 13-19 and 22-24 of Pace.

Notwithstanding these patentably distinct differences between the instant claims, applicants respectfully assert that the rejection also fails to establish a *prima facie* case of obviousness-type double patenting in accordance with the requirements set forth in MPEP §804 (8th Ed., Rev. 2, May 2004). That is, the Examiner has failed to establish why one of ordinary skill in the art would conclude that the invention recited in the instant claims 13-19 and 22-24 is an obvious variant of the invention recited in claims 13-19 and 22-24 of Pace. Applicants respectfully submit that this burden has not been met. That is, there must be a suggestion or teaching in the prior art that would motivate one of ordinary skill in the art to modify the invention recited in claims 13-19 and 22-24 of Pace to reach the invention recited in the instant claims 13-19 and 22-24. Applicants respectfully submit that the Office has not provided an adequate motivation or suggestion to modify the claims of Pace in order to render the instant

claims obvious and therefore patentably indistinct. Should the Office believe otherwise, it is respectfully requested that the Examiner contact the undersigned. Accordingly, this rejection should be withdrawn.

Claims 14-19 and 22-24 depend from allowable claim 13, are also in condition for allowance for at least this reason, as well as for reciting additional features.

CONCLUSION

In view of the foregoing amendments and remarks, applicant respectfully requests the reconsideration and reexamination of this application and allowance of the pending claims 8-24. Applicant respectfully invites the Examiner to contact the undersigned at (202)739-5203 if there are any outstanding issues that can be resolved via a telephone conference.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,
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